

Title (en)

Switching device

Title (de)

Schaltvorrichtung

Title (fr)

Dispositif de commutation

Publication

**EP 1734549 A1 20061220 (EN)**

Application

**EP 06004656 A 20060307**

Priority

JP 2005178482 A 20050617

Abstract (en)

A switching device (100) capable of preventing entrance of water from outside of a case through a space below an operation knob into the case is disclosed. The switching device includes: a switch (6); a case (1) within which the switch is accommodated; a hollow cylinder (7) which is formed integrally with the upper surface of the case and open to above and below to communicate with the inside of the case; an operation knob (6a) provided to cover an upper opening of the cylinder such that the operation knob can swing; and an operation bar (12) which extends through a lower opening of the cylinder into the case to transmit the motion of the operation knob to the switch. A concavity (5) is formed on the upper surface of the case at a position around the cylinder. A lid (10) for covering a part of the concavity is provided on the concavity near the cylinder.

IPC 8 full level

**H01H 21/08** (2006.01)

CPC (source: EP KR US)

**H01H 9/04** (2013.01 - KR); **H01H 21/08** (2013.01 - EP US); **H01H 23/06** (2013.01 - KR); **E05F 15/00** (2013.01 - EP US); **E05Y 2400/854** (2013.01 - EP US); **E05Y 2400/86** (2013.01 - EP US); **E05Y 2900/55** (2013.01 - EP US); **H01H 2021/225** (2013.01 - EP US); **H01H 2223/004** (2013.01 - EP US); **H01H 2300/01** (2013.01 - EP US)

Citation (applicant)

- JP H08180755 A 19960712 - NILES PARTS CO LTD
- JP H05314864 A 19931126 - OMRON TATEISI ELECTRONICS CO
- JP H1186662 A 19990330 - TOKAI RIKI CO LTD

Citation (search report)

- [A] EP 0633586 A1 19950111 - ABB PATENT GMBH [DE]
- [A] US 5876243 A 19990302 - SANGAWA SHUHEI [JP]

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EP1988441A1; EP3780053A4

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**EP 1734549 A1 20061220; EP 1734549 B1 20071205**; AT E380388 T1 20071215; BR PI0602296 A 20070221; BR PI0602296 B1 20180403; CA 2540468 A1 20061217; CA 2540468 C 20080422; CN 100456402 C 20090128; CN 1881494 A 20061220; DE 602006000293 D1 20080117; DE 602006000293 T2 20081127; JP 2006351443 A 20061228; JP 4280250 B2 20090617; KR 100762601 B1 20071001; KR 20060132453 A 20061221; US 2006283696 A1 20061221; US 7294800 B2 20071113

DOCDB simple family (application)

**EP 06004656 A 20060307**; AT 06004656 T 20060307; BR PI0602296 A 20060614; CA 2540468 A 20060321; CN 200610078168 A 20060428; DE 602006000293 T 20060307; JP 2005178482 A 20050617; KR 20060051339 A 20060608; US 38645306 A 20060322